

Early Morning Shocked

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Early one morning while deployed to the Arabian Gulf, our integrated weapons team was conducting release-and-control checks on an FA-18C aircraft to prepare for morning launches. An AOAN went to the aircraft electrical servicing station (AESS) control box in the aft catwalk to turn on electrical power for the checks. When he pushed the start button, he got a shock and couldn't release the control box.

Fortunately, the aircraft would not hold power and broke the connection, releasing the AOAN from the electrical current. He immediately was taken to medical and treated—he suffered no serious jury. Had the connection held, our shipmate could have been killed.

The story doesn't end there. As the squadron's safety petty officer, I went to investigate. I started at flight-deck control to make sure a trouble call for the box had been made, and the box was secured until repairs were done. I then went aft to scan the catwalk area to recreate how this mishap occurred. I noticed the catwalk was cluttered with improperly stowed gear. The area also had a fresh-water leak, and a plastic bucket had been hung from the leaking valve. However, the bucket had filled and overflowed, or had fallen off and someone had re-hung it. Although there were several fresh-water puddles on the deck, the airman was not standing in one when he touched the AESS box.

As technicians began to repair the box, I immediately saw the problem: When they opened the sealed box, fresh water ran out. We saw greasy glove prints on the wire bundle entering the controller box, and we found the grounding wire had been pulled from its connections. Below the controller, on the side of the larger terminal box where the wire bundle entered the box, we noticed footprints. It was obvious the wire going into the con-

troller was used as a grip and the wire bundle going into the terminal box below it had become a step for people climbing onto the flight deck.

The AESS controller box wires had not only been loosened and the ground connection broken



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after the bundle was continuously grabbed when Sailors climbed to the flight deck. Using the wire as a handgrip had also loosened the potting compound designed to keep moisture from seeping into the box. When the grounding-wire finally came loose,

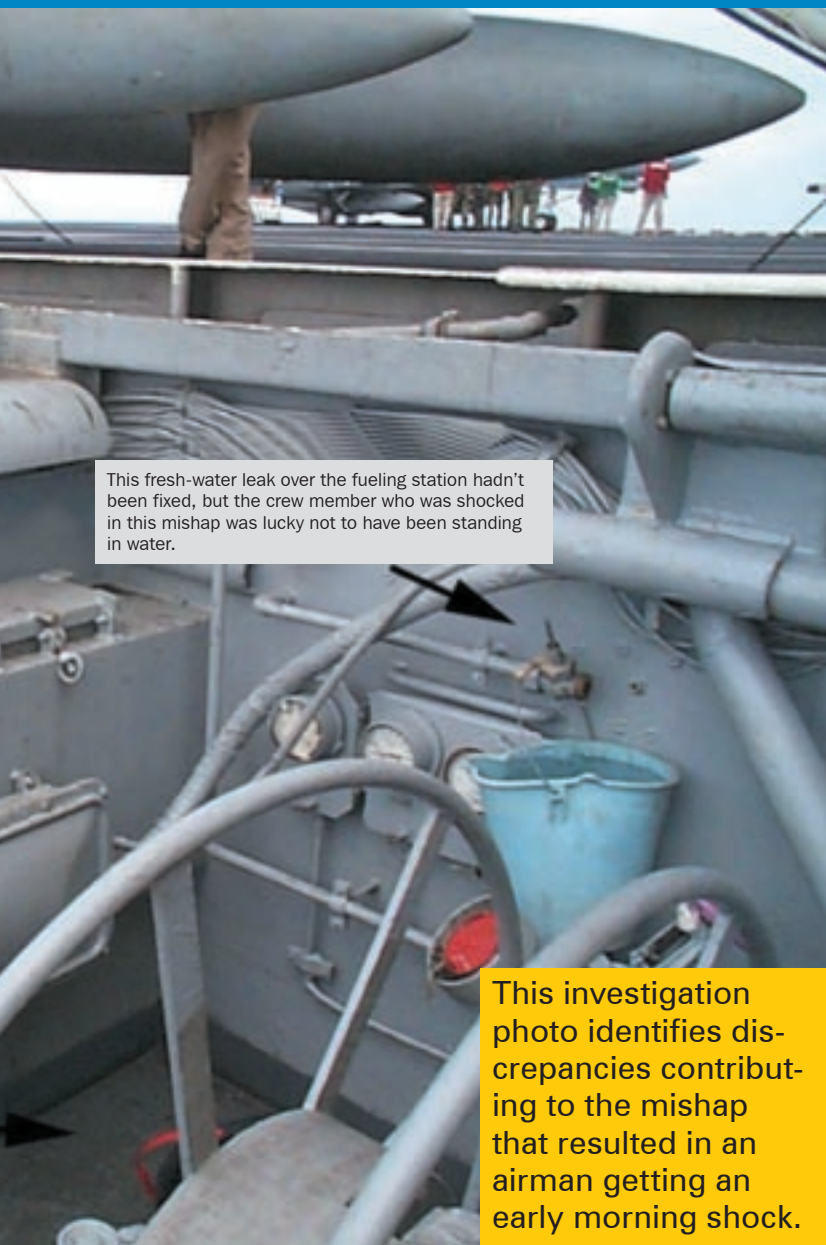
the controller box casing became “hot” and when our AOAN touched it, he completed the circuit to ground.

A subsequent area survey revealed two flight-deck-access ladders within 10 feet of the AEES-control box. Further investigation determined this particular box was the only one on the flight deck with the wire bundle entering from the top. All other AEES boxes had the cable bundle coming in through the bottom.

Here are the mistakes leading to this mishap:

- ✓ Flight-deck crews climbed out of the catwalks instead of using access ladders.
- ✓ No one reported the fresh-water leak. With fresh water at a premium while underway, someone should have reported the problem.
- ✓ After investigating, I learned this station had been “tingling” Sailors for a while, but no one had reported the shocks. After this mishap occurred, the station was tagged out, as is required. Within two weeks, crew members again were getting minor shocks at the station.
- ✓ The unusual control-box design (the cable bundle entering from the top) increased the chances for recurring mishaps.

Attention to detail and situational awareness would have removed these mistakes. Keeping equipment in good working order and using it only for its intended purpose also prevents mishaps. In this case, the AEES box with the loosened potting compound was used as a handgrip as Sailors hoisted themselves onto the flight deck. Our airman should have been spared that shocking, early-morning wakeup call. ⚡



This fresh-water leak over the fueling station hadn't been fixed, but the crew member who was shocked in this mishap was lucky not to have been standing in water.

This investigation photo identifies discrepancies contributing to the mishap that resulted in an airman getting an early morning shock.